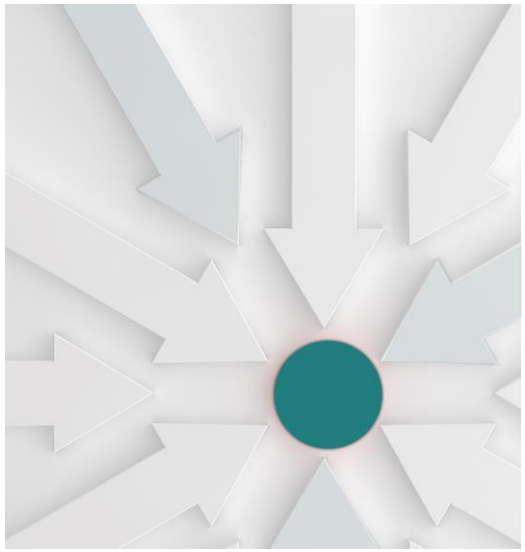
PROJECT'S OBJECTIVES

The project addresses the slag resulting from next generation steel production using direct reduced iron, hot briquetted iron, and its combination with scrap in an electric arc furnace or smelter or hydrogen plasma smelting reduction.



The slags are evaluated based on chemical, mineral, environmental and physical properties and treated with different cooling and granulation methods to produce physical characteristics needed for different applications and environmentally compatible products. The slags are examined in applications such as road construction, cement/concrete, liming material, and 3D printing.

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InSGeP

INVESTIGATIONS OF SLAGS FROM NEXT GENERATION STEEL MAKING PROCESSES

START DATE | 01-07-2023
PROJECT DURATION | 48 months
TOPIC | RFCS-02-2022-RPJ
COORDINATED BY | FEhS
CONTACT | info@insgep.eu
WEBSITE | insgep.eu

InSGeP

INVESTIGATIONS OF SLAGS FROM NEXT GENERATION STEEL MAKING PROCESSES

The project receives funding from the European Union's Research Fund for Coal and Steel research programme under grant agreement number 101112665.

CONSORTIUM

TEAM POWER

The consortium is comprised of 13 partners and three subcontractors from Austria, Belgium, France, Germany, Italy, and Spain to cover a wide area of expertise dealing with slag throughout Europe. The European Steel Technology Platform ESTEP supports activities related to communication.

Coordinator: Institut für Baustoff Forschung, FEHS

Partner: Sant'Anna School of Advanced Studies – Pisa, sidenor, RINA, saarstahl, K1 MET metallurgical competence center, PRIMETALS TECHNOLOGIES, ArcelorMittal, voestalpine ONE STEP AHEAD., BFI Excellence in Applied Research, tenova, ORI MARTIN, CRM GROUP

BEING PREPARED

The InSGeP project aims to understand the potential impact of next generation steel production on the resulting slag. Thus, their chemical, mineral, ecological and physical properties are analyzed and evaluated.

Slag is a **valuable secondary resource**. From construction materials to road bases, from cement production to agricultural enhancers, the **applications** are **vast and diverse**.

By maximizing the **potential of slag**, we can significantly reduce waste and minimize environmental impact.

WHAT'S OUR MISSION?

WITHIN THE InSGeP PROJECT WE WILL:

- define what types of future slags can be expected but also
- investigate possible valorization paths in the present value chain and
- define innovative applications to assure smooth transition processes to the steel industry.

PROJECT OVERVIEW

ABOUT InSGeP

Complying with the EU Green Deal, the RFCS objectives and Horizon Europe's Missions to move towards climate neutrality by 2050 with a zero-pollution ambition, we must ensure that, while introducing breakthrough technologies to produce green steel, the circular concept is maintained.

Slag is an unavoidable byproduct of the steelmaking process, and its sustainable recycling is a significant contribution to a circular economy.

In the scope of the InSGeP project, five steel plants, six research and technology organizations, and two plant manufacturers evaluate potential implications of future steel production on the resulting slag.

The InSGeP project is a European research initiative co-funded by the EU Research Fund for Coal and Steel (GA no. 101112665)